



## **National Transportation Safety Board**

**Testimony of  
Elaine B. Weinstein, Acting Director  
Office of Safety Recommendations and Accomplishments  
National Transportation Safety Board  
before the  
Subcommittee on Consumer Affairs, Foreign Commerce and Tourism  
Committee on Commerce, Science, and Transportation  
United States Senate  
regarding  
Child Safety Booster Seats  
April 24, 2001**

Good morning Mr. Chairman and Members of the Subcommittee. It is a pleasure to represent the National Transportation Safety Board before you today regarding child passenger safety, particularly the use of booster seats by children between the ages of 4 and 8 years old.

Americans understandably react with horror at random acts of violence that take the lives of innocent children, and they demand that action be taken when a child is killed in a school firearm incident. In 1998, 121 children under age 10 died as a result of unintentional firearm-related actions, according to the National Safe Kids Campaign. That same year, 922 children under age 10 died as passengers in motor vehicle crashes, according to the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS). Although highway crashes are the leading cause of death for children in this country, we do not hear a nationwide outcry every time a young girl or boy dies in a traffic crash. Mr. Chairman, the Safety Board applauds you for holding this hearing to bring much needed attention to this important issue.



According to NHTSA, in the decade of the 1990s, over 90,000 children died in motor vehicle crashes, and over 9 million were injured. Eight thousand six hundred of the children who died were between the ages of 4 and 8. That equals about 16 children between the ages of 4 and 8 killed each week in motor vehicle crashes. More than 70 percent of the 778 children age 4-to-8 killed in automobile accidents in 1999 were totally unrestrained (546 children), and 13 percent (105 children) were in lap/shoulder belt restraint systems designed for adults.

The Safety Board has for some time been concerned about the dangers to our children when riding in an automobile. In 1996, the Safety Board adopted a study on the performance and use of child restraint systems, seatbelts, and air bags for children in passenger vehicles.

In part, the Board's 1996 report concluded that:

- Children (especially those properly restrained) in the back seats of vehicles are less likely to sustain injury than those seated in the front seats;
- Children of all ages need to be properly restrained and should be covered by the States' child restraint and seatbelt use laws;
- More than two-thirds of the children in the Safety Board's study sample were not in the appropriate restraint for their age, height, and weight;
- Children tended to be in restraint systems too advanced for their development, such as moving from child restraint systems to seatbelts rather than using booster seats; and

- Booster seats that restrain children who weigh more than 50 pounds are not subject to any performance standards; however, booster seats are necessary for some children above that weight.

Two years ago, to focus attention on our 1996 safety recommendations, the Safety Board implemented a comprehensive campaign regarding children passenger safety. We met on several occasions with automobile and child safety seat manufacturers, participated at child safety seat fitting stations and check points, testified at legislative hearings, spoke at and attended numerous conferences and symposia, and held several meetings. As a direct result of the Board's work, we have seen many improvements regarding child passenger safety, especially related to increasing proper use of child safety seats. For instance:

- NHTSA developed a guidebook for States to use in establishing and operating fitting stations;
- Many States have set up fitting stations at health centers or in police, sheriff, or fire stations;
- DaimlerChrysler established *Fit for A Kid*, a nationwide program of permanent fitting stations, at selected dealerships. *Fit for a Kid* is now in all 50 states, and much of the U.S. population is less than an hour's drive from a *Fit for a Kid* location;
- General Motors established mobile fitting stations in every State in partnership with the National Safe Kids Campaign; and
- Ford Motor Company established the "Boost America" program to provide support for existing community fitting stations, to conduct child safety seat inspections, and to implement a campaign to give away booster seats to needy families.

Mr. Chairman, it is unfortunate that booster seats are still not recognized or understood by the public as the next step in child passenger protection after a child outgrows a child restraint system.

---

Seatbelt fit for 4-to-8-year-old children

Once children outgrow child restraint systems, they often use the vehicle seatbelts. In the crashes investigated for the Safety Board's 1996 study, 73 children should have been in booster seats according to their age, height, and weight, but only 11 children were restrained in

booster seats. Fifteen children in our study cases were improperly restrained by the vehicle seat belt. Fourteen of those children should have been in booster seats, and the other one should have been in a child safety seat.

Vehicle seat belts, like air bags, were designed to protect adults. Poor shoulder belt fit was reported in 8 seatbelt misuse cases by children in our sample as the reason for wearing the shoulder belt under the arm or behind the back. Moderate to severe injuries were sustained by 9 of the children; all but 1 were involved in high severity crashes. Five children in the study who sustained no or minor injuries were involved in low to moderate severity crashes. Improper use of the lap/shoulder belt decreased as the child's height increased above 50 inches, resulting in a better fit of the shoulder portion of the belt.

According to the Centers for Disease Control and Prevention, children who have outgrown their child safety seats should ride in a booster seat that positions the shoulder belt across the chest, and with the lap belt low across the upper thighs. Without a booster seat, a child can slouch and slide forward, causing the vehicle lap belt to ride up on to the child's abdomen, resulting in serious or fatal injuries.

The Safety Board believes that children of all ages need to be properly restrained and should be covered by the States' child restraint and seatbelt use laws. Accordingly, on October 31, 1996, the Safety Board recommended to the Governors and Legislative Leaders of the 50 States and U.S. Territories, that children up to 8 years old be required by the State's mandatory child restraint use law to use child restraint systems and booster seats. In the over five years since the safety

recommendation was issued, only three states – Washington, California, and Arkansas – have enacted some form of booster seat law.

Another problem identified in the Safety Board's 1996 study was that there were 22 children who exceeded the 60-pound weight limit established by most child restraint manufacturers for booster seats, but were too short (all of these children were less than 59 inches tall) for lap/shoulder belts according to the age, height, and weight classification system used by the Board. NHTSA's own research confirms that "the minimum size child in this study who could use three-point belts alone had a sitting height of 74 cm [29.6 inches], standing height of 148 cm [59.2 inches], and weight of 37 kg [82 pounds]." On September 20, 1996, the Safety Board asked NHTSA to establish performance standards for booster seats that can restrain children up to 80 pounds. NHTSA responded to the Board's recommendation with a letter to the child restraint manufacturers asking them if they had plans to produce booster seats for older children and if there was a need for Federal standards. NHTSA subsequently convened a Blue Ribbon Panel on older children in 1998 which recommended a number of actions similar to what the Safety Board asked for in its 1996 recommendations.

---

---

---

---

Mr. Chairman, when discussing child passenger safety there are two additional areas that need to be discussed – child-friendly back seats and children in low income families.

### Child-Friendly Back Seats

The Safety Board believes that the back seat of vehicles should be designed with children in mind. We have issued safety recommendations to the automobile manufacturers to design child-friendly back seats by having center lap/shoulder belts in the rear seats of new vehicles, lap/shoulder belts in the rear outboard seating positions that fit older children, and built-in child safety seats.

The Safety Board first asked manufacturers to consider installing center lap/shoulder belts in all newly manufactured passenger vehicles following a 1986 safety study on the performance of lap belts in frontal crashes. Although more vehicles have lap and shoulder belts in the center rear seat position today than in 1986, few minivans or sport utility vehicles – today's family car – have lap/shoulder belts available for children in all back seat positions.

Safety advocates often tell parents that the safest place for their children is the center position in the back seat because it's the farthest away from a side or frontal crash. Parents have been listening. NHTSA's FARS data show that 46 percent of all back seat occupants seated in the center position are under the age of 13, and 75 percent of them are under the age of 21. Vehicle occupants seated in the center rear seat position should be afforded the same level of protection as other occupants of the back seat.

The Board has also recommended that lap/shoulder belts in the rear outboard seating positions should fit older children comfortably and securely. Manufacturers have argued that the adjustable upper



shoulder belt anchorages, now standard in the front seat, aren't feasible in the back seat because the back seat's design renders the anchorage ineffective. If that is true, the Safety Board has suggested that manufacturers put their design teams to work looking for alternative solutions.

Lastly, the Board recommended that vehicles should have built-in child safety seats. Few manufacturers offer a built-in safety seat. It is almost solely an optional equipment item, and often is not marketed well. Auto manufacturers have suggested that built-in child seats are a tough sell. Many people who have children young enough to use them are not in the market for a new car, and car dealers do not want to stock vehicles with integrated seats.

---

#### Children in Low Income Families

A concern recently expressed by the Safety Board involves the use of booster seats in older vehicles. Booster seats currently on the market are, with one exception, designed for use with lap and shoulder belts. However, lap/shoulder belts have only been required in the outboard seating position of vehicle back seats since 1990. That means that about 34 percent of all cars (some 43 million vehicles) still in use today have lap belts in all back seat positions. Shoulder belts still are not required in the center back seat position, and many current model vehicles, including sport utility vehicles, only have lap belts in the center rear seat position. When Board representatives participated in child safety seat fitting stations and check points, we were told that it is difficult to find booster seats for use in vehicles with lap-only belts.

According to the 1995 National Personal Transportation Survey, conducted for the Federal Highway Administration, the average age of vehicles owned by low-income households is 11 years. Therefore, it is reasonable to assume that low-income families with children between the ages of 4 and 8 years old are likely to own a vehicle with lap-only belts in the back seat. The Safety Board is concerned that adequate, affordable protection is not readily available for these children when they are transported

in cars.

In December 2000, the NTSB sponsored a meeting with safety advocates and representatives of industry and government to identify immediate, short-term, and long-term actions that can be taken to ensure that all children are equally protected when they are traveling on our Nation's roadways. Some of the solutions identified by the participants include:

- More products, including lap-only belt compatible restraints;
- More education of parents of 4-to-8-year old children about the need to use booster seats;
- Incentives, such as store/manufacturer coupons, to purchase low cost booster seats and more availability of booster seats in stores that reach low-income and minority families; and
- Retailer education to ensure that booster seats are available.

As a result of the Safety Board's meeting, representatives of the Departments of Transportation, Health and Human Services, and the Safety Board's Chairman signed a Letter of Intent to work together to increase the availability of child safety seats and booster seats for low-income families.

Mr. Chairman, too many parents buckle their children into adult restraints in their automobiles and think their child is safe. We know that is not the case. The Safety Board believes that action must be

taken by the States, the automobile manufactures, and NHTSA to ensure that there is one level of safety for all children.

That completes my statement, and I will be happy to respond to any questions you may have.